

PHOTO BY LINDA RABER



CONGRATULATIONS Neil and Christina Bartlett enjoy the festivities at the landmark celebration.

NOBLE GAS REACTIVITY RESEARCH HONORED

International Historic Chemical Landmark marks Neil Bartlett's discovery of noble gas reactivity

"AS CHEMICAL EDUCATORS, we visualize ourselves as open-minded scientists uninfluenced by authority, who pride ourselves on viewing our scientific beliefs not as absolute truths but as tentative hypotheses that we are prepared to modify or abandon in the light of new discoveries. However, in July 1962, while attending a conference ... my open-mindedness was put to the test—and I flunked!" recalled chemistry professor George B. Kauffman of California State University, Fresno, in an article for the *Chemical Educator* (Vol. 9, No. 6, published on the Web Nov. 24, 2004).

Kauffman continued: "Someone interrupted one of the lectures and announced that Neil Bartlett, a young (born 1932) and comparatively unknown lecturer at the University of British Columbia at Vancouver, had prepared a compound of an inert gas—xenon hexafluoroplatinate(V), XePtF_6 ."

Forty-four years later, on May 23, Bartlett and his colleagues, friends, and students gathered in Vancouver where the American Chemical Society and the Canadian Society for Chemistry designated the work that established noble gas reactivity as an International Historic Chemical Landmark.

In his remarks to those gathered at the event, ACS Board Chair James D. Burke noted that the National Historic Chemical Landmarks Program has been active since 1993. Since then, more than 50 sites have been designated landmarks, from the

first landmark—the Bakelizer—to the first synthetic plastic to nylon to the first house paint for do-it-yourselfers.

Burke presented a commemorative bronze plaque to R. Grant Ingram, dean of the faculty of science at the University

of British Columbia. Also participating in the plaque presentation was David Schwass, vice president and incoming president of the Canadian Society for Chemistry. The text of the plaque reads in English and French:

"In this building in 1962 Neil Bartlett demonstrated the first reaction of a noble gas. The noble gas family of elements—helium, neon, argon, krypton, xenon, and radon—had previously been regarded as inert. By combining xenon with a platinum fluoride, Bartlett created the first noble gas compound. This reaction began the field of noble gas chemistry, which became fundamental to the scientific understanding of the chemical bond. Noble gas compounds have helped create antitumor agents and have been used in lasers."

Events of the day included a luncheon, which was attended by many of Bartlett's colleagues; a ceremony at which Bartlett donated some of his original lab notebooks to the university; and a public lecture in the evening. In addition, the university used the opportunity to officially christen its newly renovated Chemistry North building. The next day, the university also conferred the honorary doctor of science degree on Bartlett at its spring convocation.

Bartlett has clear memories of his dis-

ANALYTICAL DIVISION TO MEET AT PITTCON IN 2007

For more than two decades, analytical chemists have had a choice of two big spring meetings in two cities approximately two weeks apart. In 2007, however, analytical chemists will meet once in Chicago. The ACS Division of Analytical Chemistry (ANYL) has decided to present its spring programming jointly with the Pittsburgh Conference on Analytical & Applied Spectroscopy (Feb. 25–March 1) and not formally participate in the ACS national meeting.

The idea to coprogram has been on the table for years, but meetings planned for the same city precipitated some action, says Laurie E. Locascio of the National Institute

of Standards & Technology and ANYL programming chair for 2007. With more than 10,000 members, ANYL is the one of the largest ACS technical divisions. She says many members already attend Pittcon regularly, and often the two conferences compete for the same speakers.

Analytical chemistry is a broad field, and the division is trying to reach out to members where they are, she says. For several years, ANYL's Chromatography Subdivision has given its Young Investigator Award at Pittcon. "So the division, as a whole, is actually following them," Locascio says. "We did a lot of polling of our members

before we made this decision," she says. "In general, people are excited, and we're looking forward to it."

Although Pittcon has given ANYL full control over its part of the programming, being at Pittcon is an experiment, and no decisions have been made for 2008 yet, she says. "But we are looking forward to using the money that we have saved by coprogramming in the spring to beef up our presence at the fall ACS national meeting in Boston in 2007."

Abstracts for Chicago must be submitted to Pittcon by Aug. 1. Only ACS members can present at the four coprogrammed sessions.—RACHEL PETKEWICH

covery of xenon oxidation that he's happy to share. He recalls that early in 1962, while preparing a lecture, he noticed the common textbook illustration showing that the first ionization potential for the elements in any group in the periodic table falls with increasing atomic number. "Immediately, I realized that the heavier noble gases had ionization potentials like that of O_2 , which my graduate student Derek Lohmann and I had shown was oxidizable to $[O_2]^+$ by PtF_6 ," Bartlett says.

The critical experiment suggested itself easily. Bartlett decided to mix PtF_6 with xenon and observe what happened. "It had taken a few weeks to order in some xenon," he says, "and because I had no experienced coworkers, I was obliged to prepare all apparatus and PtF_6 by myself." Because of his teaching schedule, Bartlett wasn't ready to carry out the experiment until Friday, March 23.

"It took all morning to make my PtF_6 and all afternoon to assemble the remainder of the apparatus, test it for leaks, and thoroughly dry it by flaming out the glass and quartz under vacuum," he says. Finally, at about 6:45 PM he transferred his small sample of PtF_6 to a sensitive quartz sickle gauge and measured its pressure. He then added xenon into the gauge to roughly the same pressure. "When I broke the seal between the red PtF_6 and the colorless xenon, it was about 7 PM," he recalls. "The two gases reacted instantly to precipitate a deep-yellow solid. The measurements indicated that the yellow solid had a composition $XePtF_6$."

"Naturally, I thought that I should share this remarkable result with someone else. There was no one in the building! It appeared that everyone had left for dinner." It took Bartlett two more hours to hydrolyze the sublimed solid to show that it contained xenon, a finding confirmed by his colleague David Frost.

"When I got home, it was about 9:30 PM," Bartlett remembers. "My wife had been anxiously wondering where I was, and dinner was ruined. She is not a chemist, so it took a little while to persuade her that I had an excellent excuse!"

Bartlett is concerned that research in the field may be slowing down because few students are being trained in high-risk research involving elemental fluorine. "Most of the research is being led by chemists in their sixties or older, with less than a handful of younger investigators worldwide leading research groups."

He remains enamored of his field of research, which, he says, "demands not only great care and high experimental skill, but also a spirit of adventure."—LINDA RABER

MEETINGS

CALL FOR PAPERS FOR THE ROCKY MOUNTAIN REGIONAL MEETING

THE 19TH ROCKY MOUNTAIN REGIONAL Meeting of ACS ([RM]₂ ACS 2006), hosted by the ACS Southern Arizona Section, will take place at the DoubleTree Hotel Reid Park, Tucson, on Oct. 14–18. The theme of the meeting, "Chemistry at the Borders," represents the interdisciplinary nature of chemical research on which the meeting is based as well as the geographic location of the meeting.

Abstracts are sought in a variety of multidisciplinary chemical research areas: chemistry of drug development; chemistry in the wild, wild West; pathways and natural products; materials chemistry for electronics and photonics; chemical education; chemistry in silico; chemical biology; astrochemistry; and environmental chemistry.

Planned symposia include "Bioinspired Chemical Sensing," "The Chemistry of Terrorism," "Chemistry and the Environment," "The Chem in Biochem: Enzymes and Mechanisms," "Chemical Biology of Cancer," "Digital Technologies for Teaching Chemistry," "A Little Chemistry: Polymers and Nanostructured Materials," "If It's Material, It's Chemistry," "Chemistry Out of This World," "Technology Transfer," "Chemical Origami: Conformation in Chemistry and Biochemistry," "Intellectual Property," "Drug Formulations," "Worlds Apart: DNA and DNA Enzymes," and "Fibers, Films, and Tires: Polymers in Modern Life." The meeting website, www.rmcs2006.arizona.edu, has frequent program updates.

Workshops are planned on photoelectron spectroscopy and ionization energies for chemical educators, biological mass spectrometry and MS analysis of large and small molecules, advanced technologies and methodologies for high school chemical education, and science education strategies for elementary and intermediate educators.

Extensive undergraduate and graduate student programming is planned and will include an undergraduate poster competition and a symposium, as well as a graduate recruiting fair. Graduate students will find programming geared to their interests, including special guest speaker, Charles W. Bamforth, who will discuss the chemistry of brewing beer.

The Women Chemists Committee will

host a luncheon; F. Ann Walker, recent winner of the Alfred Bader Award in Bioinorganic Chemistry, will be the guest speaker. An awards banquet is scheduled for Oct. 16 to honor regional and national ACS award-winners. On Oct. 17, a poster session and reception is planned. Closing the meeting on the afternoon of Wednesday, Oct. 18, will be a golf tournament. Proceeds will be donated to local high school chemistry laboratories.

In addition to these events, special symposia will honor regional pioneers in interdisciplinary research. On Oct. 16 and 17, two full-day symposia are scheduled in honor of Victor J. Hruby and David F. O'Brien to recognize their contributions to chemical research in the region.

The ACS Department of Career Management & Development will conduct workshops on targeting the job market, résumé writing, and interviewing skills. Individualized career assistance also will be available. Attendees and employers may register in advance by contacting Garretta Rollins at g_rollins@acs.org or by calling (800) 227-5558 ext. 6210.

The Division of Chemical Health & Safety is bringing workshops to [RM]₂ ACS 2006. These include "Principles of Laboratory Safety," "Developing an Effective Laboratory Safety Program," "How To Be a More Effective Chemical Hygiene Officer," "Laboratory Waste Management," and the Chemical Hygiene Officer Certification Exam. All workshops are listed on the registration form; details are available on the meeting website.

An exposition will be held on Oct. 16–17. Information for exhibitors is available at www.rmcs2006.arizona.edu/exhibitor.html. For more information, contact Roger L. Caldwell at rmcs2006@chem.arizona.edu. Schools interested in participating in the Graduate School Fair should contact John Rousselle at rmcs2006@chem.arizona.edu.

Online abstract submission is open until Aug. 1. Advance registration closes Sept. 21. Rooms are available for [RM]₂ ACS 2006 attendees at the DoubleTree Hotel Reid Park. Reservations can be made by calling the hotel directly at (520) 881-4200. Detailed information on lodging and travel is also available on the meeting website. ■